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Keywords: APA; Cancer; Child; Quality of live; Physical reconditioning

Objectives.– The objective of the APAOP (Adapted Physical Activity in Paediatric Oncology) study is to assess through a multicentre randomized clinical trial the effectiveness of a program of adapted physical activity (APA), taught with an inspiring educational approach (playful, freedom of choice...) fitness (VO^2 Max, FC...), and quality of life related to health (HRQOL) of children and adolescents aged 6–18 years, treated for cancer.

Material and methods.– We postulate that motivation has a significant impact on the effects obtained following our initial study APOP that a crossover analysis showed a significant effect of adapted physical activity during hospitalization.

Results.– Thus, regardless of the respondent ($n = 30$), scores of quality of life related to health were significantly higher during hospital stays with APA for the following dimensions: physical function, role physical, mental health, self-esteem and general behaviour.

Discussion.– The ambition to achieve any multicentre study throughout the care pathway and after (follow-up 5 years) will confirm the importance of such APA program in improving the quality of life related to the health of children with a cancer and in most psychological and physical dimensions.

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Posters

P411-e

Feasibility study of a program of adapted physical activities at home with children and adolescents treated for cancer

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Keywords: Pediatric oncology; Physical activity; Physical activity adapted; Home; VISIOAPA

Introduction and background.– Therapeutic advances in pediatric oncology possible to obtain a cure rate of 85% to the price of heavy treatments requiring frequent hospitalizations and/or prolonged. Physical activity (PA) controlled by containment and asthenia and leads to dramatic consequences on the body. The encouraging results of some studies on the effect of AP during hospitalization shoot CHU Montpellier since 2012 to propose an approach to maintaining fitness through sessions of Adapted Physical Activity (APA).

Objective.– While home care democratized with the recommendations of the Cancer Plan to minimize the time of hospitalization, the question to continue this program in APA home arose.

Methods.– In this context, the department worked with the innovative company V@SI, the establishment of a feasibility study of an APA program at home using the "VISIOAPA" tool.

Results.– The encouraging results of the pilot phase reveal the interest of such an approach in terms of accessibility to practice using new technologies and the satisfaction of moving home.

Discussion and conclusion.– Today, our goal is to prove the need for such a program throughout the course of care (hospital & home).

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P412-e

Cancer rehabilitation of children with solid tumours

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Introduction.– Cancer rehabilitation is becoming more of a focus for the field of physiatry due to increased longevity and the side effects of treatment.

Material and methods.– In order to investigate the rehabilitation needs of patients, chart analysis was conducted on 40 children (aged 2–19 years) treated for primary solid tumours by chemotherapy, radiotherapy, oncologic surgery, included limb-sparing procedures. Patients underwent a course of preoperative and postoperative inpatient physical therapy. This study evaluated the short and long-term changes in physical fitness of a child with a childhood malignancy; using an individual rehabilitation program, consist with combined physical exercise, kinesiotherapy, aquatic rehabilitation, psychosocial intervention implemented during and shortly after treatment. Training is performed individually, under the supervision of an experienced paediatric physical therapist.

Results.– We suggest that the usage an individual rehabilitation program can decrease pain, improve muscle strength and range of motion in joints, an increased supply of blood to the muscles, higher muscle metabolism, and more circulation in the limbs, improves tissue nutrition and helps the healing process.

Discussion.– Childhood cancer patients undergoing long-term cancer therapy may benefit from a an individual rehabilitation program since it may maintain or enhance their physical fitness and increase their quality of life.

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P413-e

Assessment of clinical program "physical activity and breast cancer" (CHRU Lille – France)

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Keywords: Physical activity; Breast cancer

Introduction.– The benefits of physical activity are recognized to be effective for patients suffering from breast cancer.

Objective.– The purpose of our study is to assess the effects of practicing physical activity within 6 months among 16 cancer patients through a clinical program called "physical activity and breast cancer" conducted in the University Hospital Centre (CHRU) of Lille.

Methods.– We have assessed physical parameters (weights, cardiac parameters, lymphedema, and physical abilities), quality of life, anxiety, depression and fatigue.

Results.– We have demonstrated a significant improvement in the quadriceps muscular endurance (+21 sec, $P = 0.002$), in the quadratus lumborum (+7 sec, $P = 0.049$), in the heel-to-buttock distance (-3.5 cm, $P = 0.042$), and in the quality of life for the SF36 "physical activity" (+11 points, $P = 0.034$). The improvement was not significant for the other SF36 parameters as well as for the total fatigue (Piper fatigue scale), anxiety and depression (HAD scale). There has not been any significant variation of upper-extremity circumference.

Discussion-conclusion.– We regret a lack of statistical power mainly due to our small sample. Our results lead us to encourage women suffering from breast cancer to practice physical activity, and adapt our physical activity management.

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P414-e

Physical activity training for cancer patients

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